



Ending the HIV Epidemic Plan (EHE) –  
Mecklenburg County, NC  
December 2020.

## EXECUTIVE SUMMARY

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Mecklenburg County Public Health's (MCPH) Ending the HIV Epidemic (EHE) efforts quickly pivoted in response to Covid-19 mandated Stay at Home guidelines and restrictions, creatively using virtual platforms to maintain community engagement in the planning process.

ZOOM was used to continue the regular meeting schedule of The Getting to Zero (G2Z)/EHE task force, comprised of Community Based Organizations (CBOs), healthcare providers, infectious disease specialists, implementation researchers, academic institutions, members of the Ryan White Part A planning body, and MCPH staff. These meetings allowed members to provide input and share in the development of the EHE plan. Surprisingly, attendance grew in both numbers and diversity as community members eagerly accepted the convenience of meetings without travel. The use of "chat rooms" and evaluation polling led to active engagement in the discussions, sharing of ideas and participation in the decision-making process.

This platform was extremely effective in engaging new stakeholders:

- A series of listening sessions with faith leaders discovered great interest in the EHE initiative and guidance on how they could be most effective in both their congregations and neighborhoods to help end HIV.
- Listening session with the detention centers which centered on discussions around providing Pre-Exposure Prophylaxis (PrEP) to PrEP eligible residents and strengthening post-incarceration linkage-to-care for HIV positive inmates being released.
- Discussions with local colleges and universities (Davidson, Johnson & Wales, UNC-Charlotte and Queens). The colleges and universities explained that assistance with condom availability and additional campus-based HIV testing services would be beneficial.

These efforts built on the accomplishments achieved in the pre-Covid portion of the planning process - focusing on assessing needs, barriers, gaps and unmet needs, and strategizing on the best way to address unmet needs, gaps and barriers.

Several assessments were conducted to inform the plan:

- HIV needs assessment
- HIV workforce capacity assessment
- PrEP provider assessment
- Assessment to identify who is diagnosing HIV in Mecklenburg County
- Assessment to identify the length of time it takes to link a newly diagnosed patient to care
- Several guided listening sessions with the detention centers, colleges and universities, and faith leaders.

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Our planning efforts established the following goals to meet by 2025:

**Diagnose:**

- **Goal 1** : At least 75% of Mecklenburg County residents 13 years or older are tested/screened at least once, per CDC guidelines

- **Goal 2:** Increase HIV testing rates in priority populations (African American (AA) MSM ) by 75%

#### **Treat**

- **Goal 1:** Link 90% of newly diagnosed clients to care within 7 days of diagnosis
- **Goal 2:** 90% of PLWH and who are in care, are virally suppressed
- **Goal 3:** Reduce percentage of persons who have fallen out of care by 17%

#### **Prevent**

- **Goal 1:** Reach at least 60% of MeckCo. residents and visitors with an evidenced-based HIV prevention message
- **Goal 2:** At least 34% of persons with PrEP indications are on PrEP
- **Goal 3:** At least 90% of persons referred to PrEP by MCPH are linked to PrEP services within 10 days
- **Goal 4:** Efforts are made to re-engage 90% of PrEP clients who have discontinued PrEP medication for reasons other than insurance ineligibility or potential side effects, and who are still at high risk for acquiring HIV

#### **Respond**

- **Goal 1:** Increase MCPH's capacity to identify and investigate active HIV transmission clusters and respond to HIV outbreaks
- **Goal 2:** By year 5 MCPH will develop a fully functioning HIV Rapid Response Surveillance System and Dashboard
- **Goal 3:** By end of 2021 develop a local Mecklenburg County HIV/STI outbreak response plan

## SECTION I: ENGAGEMENT PROCESS

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In 2018, prior to the national launch of the Ending the HIV Epidemic initiative, Mecklenburg County Public Health (MCPH) along with community members began a series of planning meetings to create plans for an aggressive, comprehensive, and effective community-level approach to lower new HIV infection rates and to improve care for People Living With HIV (PLWH) in Mecklenburg County. Community partners engaged in the planning process consisted of: MCPH staff; people at high risk of acquiring HIV; members of the Ryan White Charlotte TGA Planning Group; pharmaceutical companies; local HIV prevention and care providers; community-based organizations; social services providers; representatives from the North Carolina (NC) State HIV planning body. The group met over a period of six months to develop Mecklenburg County's plan to end HI, most commonly known as the Getting to Zero Mecklenburg County (G2ZMeckCo.) plan.

It was noted in the G2ZMeckCo. Plan the need for additional community/stakeholder engagement and assessments across the HIV Prevention and Care continuum. The national launch of the Ending the HIV Epidemic (EHE) Initiative provided MeckCo. the opportunity to build upon the G2ZMeckCo. plan: in-depth assessments across the HIV Continuum were conducted and additional voices were brought to the table for planning. The new stakeholders engaged in the EHE planning process consist of: Detention Centers; Colleges; Delta Sigma Theta Charlotte Chapter; Faith Leaders of the African American and Hispanic/Latino Churches; the LatinX/Hispanic community; people of trans experience; implementation scientists.

Engagement with the above stakeholders occurred as follows:

- one listening session held with Detention Centers
- one listening session held with Universities and Colleges
- 3 faith-based working group meetings
- one online survey with African American Churches and Hispanic Churches in zip codes with the top 5 highest HIV prevalence
- focus groups with the LatinX/Hispanic community conducted as part of a needs assessment outsourced to the Black AIDS Institute
- focus groups with people of transgender experience conducted as part of a needs assessment outsourced to the Black AIDS Institute
- focus groups, key informant interviews and online surveys with transgender people of color as part of the TransCarolinas study, a Centers for AIDS Research (CFAR) funded study
- engagement of providers through the monthly G2ZMeckCo. meetings, Pre-Exposure Prophylaxis (PrEP provider Cohort Study), Scale-up Approaches for Non-PrEP Providers (SCAN) study, HIV workforce capacity assessment
- engagement of the Ryan White Charlotte TGA Planning Body at two of their meetings, and monthly engagement with the G2ZMeckCo. planning group
- engagement with community partners through the G2ZMeckCo. monthly meetings.

## SECTION II: EPIDEMIOLOGIC PROFILE

The goal to achieve a continuous reduction in new cases of HIV is supported by what the epidemiological data tells us. Since 2019 data is still preliminary at this time, 2018 data is used for this report.

At the end of 2018, an estimated 35,457 people in North Carolina were living with HIV. Of those, nearly 1 in 5 ( $\approx 7,000$  people) and 255 newly diagnosed reside in Mecklenburg County. In Wake County, with essentially the same population size, over 3,700 people are currently living with HIV. Nowhere else in North Carolina does this disease have a greater impact on its residents' financial, mental, and physical health; and overall quality of life than Mecklenburg County.

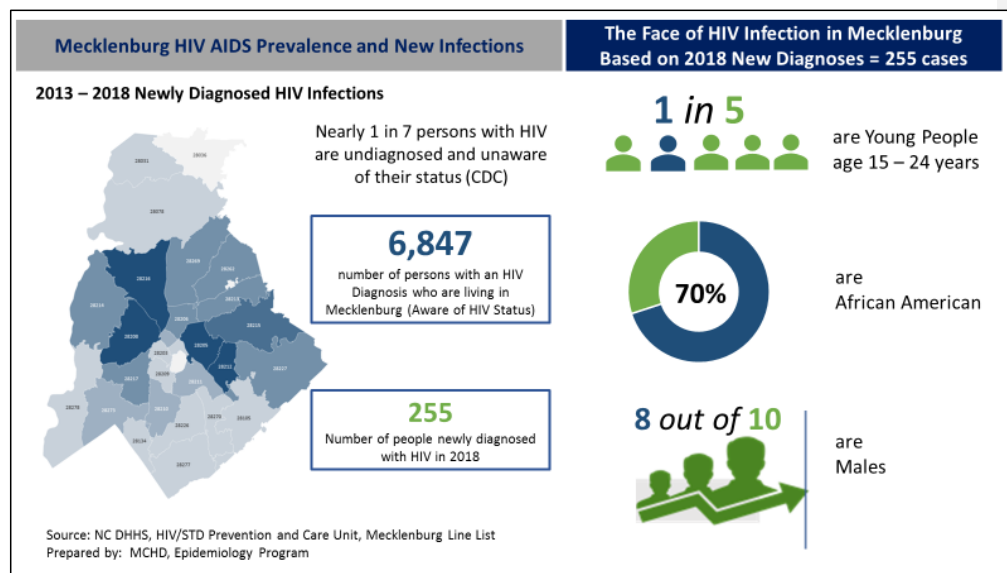


Figure 1: Mecklenburg HIV/AIDS Prevalence and New Infections.

Risk factors for HIV are the same for everyone regardless of age, race, ethnicity, or gender. However, a range of social, economic, and demographic factors contribute to higher rates of infection in some groups more than others. In Mecklenburg, nearly 1 in 5 new HIV infections occur among people aged 15 - 24 years, and Blacks account for nearly 7 out of 10 new infections. A substantial burden of disease is found among males, who represent nearly 80% of new infections each year (Figure 1).



Mecklenburg County New HIV Diagnoses\* in Adolescents and Adults\*\*, 2014 – 2018  
By Race, Gender and Exposure Category

	2014		2015		2016		2017		2018		Total (2014 - 2018)	
RACE/ETHNICITY	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total
Asian/Pacific Islander	9	3%	0	0%	8	3%	5	2%	***	***	25	2%
Black/African American	209	68%	209	73%	187	71%	181	67%	186	73%	972	70%
Hispanic/Latino	23	7%	32	11%	27	10%	36	13%	21	8%	139	10%
White/Caucasian	58	19%	37	13%	39	15%	37	14%	39	15%	210	15%
Multiple Race	10	3%	9	3%	***	***	12	4%	6	2%	40	3%
Unknown/Unspecified	***	***	***	***	***	***	***	***	***	***	2	0%
TOTAL	309	100%	288	100%	264	100%	272	100%	255	100%	1388	100%

	2014		2015		2016		2017		2018		Total (2014 - 2018)	
GENDER	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total
Male	258	83%	237	82%	215	81%	219	81%	216	85%	1145	82%
Female	51	17%	51	18%	49	19%	53	19%	39	15%	243	18%
TOTAL	309	100%	288	100%	264	100%	272	100%	255	100%	1388	100%

	2014		2015		2016		2017		2018		Total (2014 - 2018)	
AGE GROUPS <sup>2</sup>	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total	Cases	% of Total
13 - 19 yrs	***	***	***	***	***	***	7	3%	12	5%	23	2%
20 - 24 yrs	16	5%	25	9%	35	13%	39	14%	35	14%	150	11%
25 - 29 yrs	83	27%	72	25%	66	25%	76	28%	67	26%	364	26%
30 - 34 yrs	52	17%	50	17%	51	19%	45	17%	26	10%	224	16%
35 - 39 yrs	41	13%	32	11%	33	13%	26	10%	34	13%	166	12%
40 - 44 yrs	29	9%	27	9%	16	6%	23	8%	23	9%	118	9%
45 - 49 yrs	32	10%	26	9%	14	5%	14	5%	15	6%	101	7%
50 - 55 yrs	17	6%	18	6%	13	5%	15	6%	19	7%	82	6%
55 - 59 yrs	11	4%	18	6%	13	5%	16	6%	12	5%	70	5%
60 and over	27	9%	20	7%	20	8%	11	4%	12	5%	90	6%
TOTAL	309	100%	288	100%	264	100%	272	100%	255	100%	1388	100%

\* HIV Diagnoses includes all persons with reported HIV diagnoses regardless of stage of disease, HIV infection or AIDS. AIDS cases are included in these reports. Data subject to change as new information becomes available.

\*\*Pediatric cases (ages 0 -12 years) are not included.

\*\*\*Numbers too small for reporting. Percentages may not total 100% due to rounding.

Data Source: NC DHHS HIV/STD Prevention and Care Unit, Mecklenburg County Line List as of September 2019.

Prepared by: Mecklenburg County Public Health, Epidemiology Program October 2019

Figure 2: Mecklenburg county new HIV Diagnosis in Adolescents and Adults, 2014 - 2018

Furthermore, the rate of Black males living with an HIV diagnosis is 5 times that of White males. Moreover, while recent data point to declines in infections among women, Black females are 12 times more likely to be infected with HIV than White females, one of the largest HIV related disparity gaps in the county. Men who have sex with Men (MSM) account for the largest reported exposures for HIV, representing nearly 70% of new HIV infections. Success in HIV prevention can only be achieved by addressing these disparities and working to achieve health equity for all Mecklenburg County residents. Mecklenburg County neighborhoods most affected by HIV are also disproportionately affected by the social and structural determinants of health that originate from social, political, and racial injustice. Social and structural determinants include lack of access to affordable housing, transportation, employment, economic opportunity,

healthcare, and health insurance, and unequal access to quality education. These factors contribute to HIV-related disparities between Blacks and Whites and create barriers to achieving health equity in our community.

In addition to the burden of HIV and HIV-related disparities, syphilis infections in Mecklenburg County are much higher than those of just 5 years prior (Figure 3). Increased rates of Syphilis infections have serious implications for the HIV epidemic in Mecklenburg County. Individuals with syphilis are more likely to get HIV in the future. One reason is the behaviors that put someone at risk for Syphilis will often put them at risk for HIV infection. This recent increase of syphilis has the potential to lead to HIV infection outbreaks in Mecklenburg County if the risk behaviors are not addressed at the community level. Nearly 430 early Syphilis infections were diagnosed in 2018 compared to 263 diagnoses in 2014. Syphilis infections increased dramatically between 2014 and 2016 before declining in 2017 (from 507 diagnoses in 2016 to 460 in 2017) and again in 2018. Nearly 1 in 3 Syphilis cases were among young adults ages 25-29.

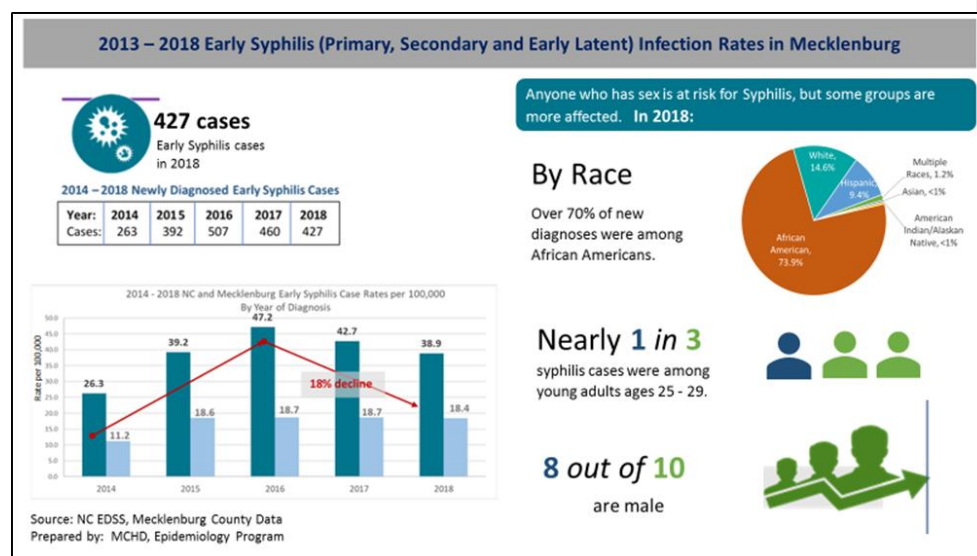


Figure 3: Early Syphilis Infection Rates in Mecklenburg County



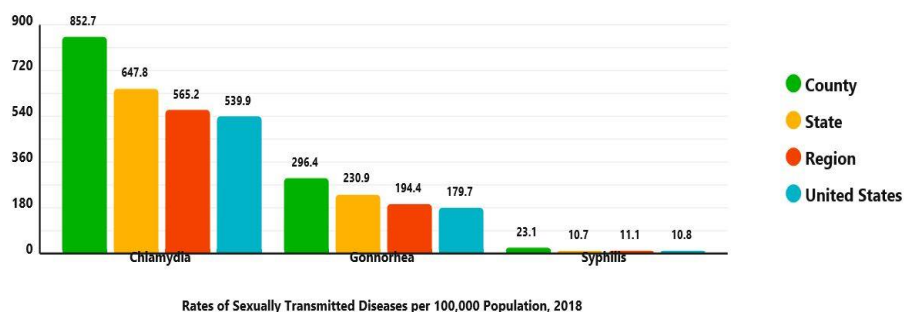


Figure 4: Rates of Sexually Transmitted Diseases per 100,000 Population , 2018 (Source AIDSVU)

In 2018 the rates of sexually transmitted infections (STI) per 100,000 population were highest in Mecklenburg County when compared to the State, region, and the USA.

Ensuring that all PLWH receive the treatment they need, are retained in care, and ultimately achieve viral suppression are important steps in reducing HIV transmission rates. Of the more than 7,000 individuals living with HIV in Mecklenburg, approximately 76% had at least one indicator of care in the past year. Nearly 73% of PLWH were reported to be retained in care. Viral suppression rates in the county range from 65% - 73%. As current estimates of care in the county rely heavily on surveillance-level data and may not include all care visits for PLWH, these data are believed to be underestimated. Enhancing HIV care and treatment linkages for all residents will lead to better outcomes and higher viral suppression rates. For example, the Charlotte-Mecklenburg Ryan White Part A (RWHAP) program links PLWH without insurance or those who are under-insured to quality care/treatment in a six-county region. During financial year 2019, nearly 2,600 Mecklenburg County residents received RWHAP services; 76% of these clients were retained in care during the year. Approximately 3 in 4 (75%) were reported as being virally suppressed. (source: Ryan White Continuum of Care Data, FY2019)

## SECTION III: SITUATIONAL ANALYSIS

### 3.1: Diagnose

In Mecklenburg County, the top five ZIP Codes with the highest prevalence of PLWH are 28205, 28208, 28212, 28206, and 28215 [MCPH Epidemiology, 2018]. Generally, the demographics of these areas reflect a large racial/ethnic minority population. Furthermore, there is a significant disparity in the prevalence and new diagnoses of HIV in the Black population compared to Whites. Males represented nearly 80% of new infections in 2018, and the number of Black males living with HIV is five times higher than White males. The number of Black females living with an HIV diagnosis is 12 times that of White females. [MCPH Epidemiology, 2018]. Based on 2015 – 2018 age-adjusted data, HIV death rates among Mecklenburg racial/ethnic minorities are 5 times higher than death rates for Whites [MCPH Epidemiology, 2019]. Given these statistics and studies that show the significance of routine HIV testing and education, and their positive impact on reducing the rate of HIV, it is important to increase access to testing by expanding beyond health care settings particularly in areas of high HIV prevalence.

According to the CDC, half of Americans recently diagnosed with HIV had been living with the virus for at least three years before being diagnosed. If that statistic is applied to Mecklenburg County, that means approximately 128 of the 255 people diagnosed in 2018 had been living with HIV since 2015.

According to Mecklenburg County's HIV Care Continuum data, the highest number of HIV diagnoses are made by office practices, MCPH testing clinics and programs, and hospitals. Some facilities, such as emergency departments, have been making surprisingly few diagnoses. There is a wide disparity in the numbers of new diagnoses made among each of these facilities, varying from 252 within 5 years by one of the MCPH clinic sites, to 1 or 2 diagnoses within 5 years by individual clinic practices (Fig5.a, b). If routine "opt-out HIV testing" – which involves routinely performing an HIV test after notifying the patient that the test will be done and consent is implied unless the patient declines – was administered during doctor visits, some of those reflected in Mecklenburg County's numbers would have been diagnosed sooner and had an opportunity for early HIV treatment. Thus, wide adoption of routine opt-out HIV testing as a standard of care, coupled with rapid linkage to care or prevention services, represents a significant opportunity to reduce the number of new HIV cases.

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## Type of Health Facility Making HIV DX MeckCo Adults-Adolescents, 2013-2017

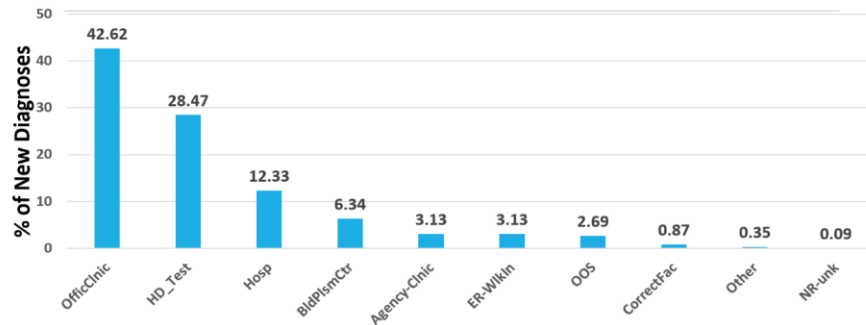


Figure 5a: Healthcare Providers making HIV diagnosis – Adults and Adolescents living in MeckCo.

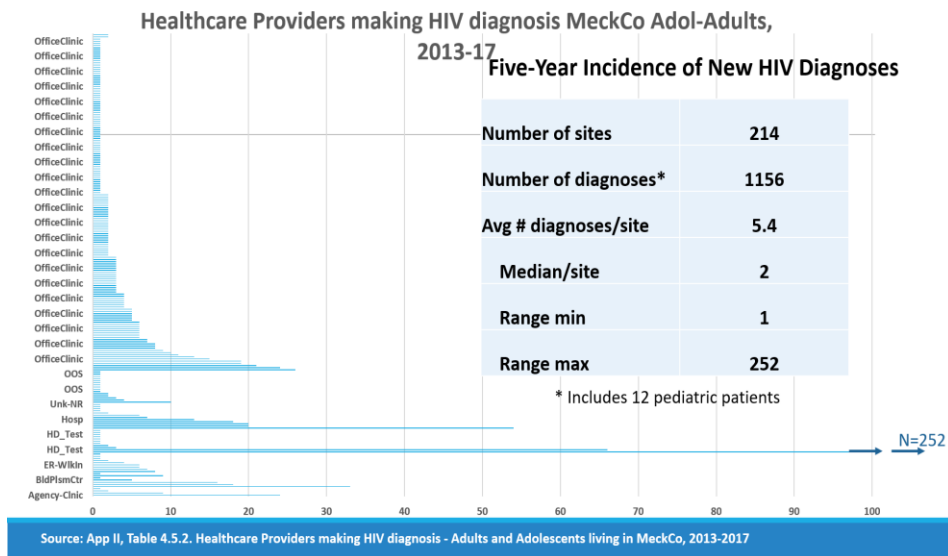


Figure 5b: Healthcare Providers making HIV diagnoses – Adults and Adolescents living in MeckCo., 2013 – 2017

The CDC recommends that individuals between the ages of 13 and 64 get tested for HIV at least once as part of routine health care, and those with risk factors get tested more frequently [CDC, 2006]. According to NC law, HIV testing may be offered as a part of routine lab work. A specific consent form for HIV testing is not required if the patient is informed that they are being tested for HIV and given the opportunity to refuse. Additionally, pre-test counseling is not required, and post-test counseling is only required with a positive HIV test [N.C.G.S. §41A.0202(15)].

#### Gaps:

- Routine opt-out HIV testing is inconsistently offered in Mecklenburg County.
- When we examined which healthcare facilities are making HIV diagnoses, there are inadequate services and inconsistent opportunities to diagnose HIV in the County.
- Not all providers/agencies follow the CDC age recommendations for HIV testing. Hence, some agencies/providers start testing at 13 years, while others start testing much later at 18 years.
- Inconsistent sexual health education across schools.
- Findings from listening sessions and surveys on college campuses, in the community, at STI clinics, and with Churches indicate the lack of awareness about the importance of early HIV diagnosis, and where to test for HIV outside the Health Department.

#### Barriers:

- Limited non-traditional HIV testing locations and times. Among the non-traditional sites that exist, there is inadequate coordination of testing due to competition for the limited funding available for these sites to provide testing and other services (e.g. linkage to care). This competition for funding is a barrier to collaboration among these sites. Specifically, agencies that manage testing sites often do not share with each other where they will be testing to ensure that there is no overlap in testing times and locations. Agencies develop their own testing strategies, hours, and locations with no coordination, which creates service gaps relative to the need for later testing hours, weekend hours, or convenient locations in the areas with high HIV rates and disparity.
- Motivation to seek testing also depends on knowledge of the risk of HIV and its relevance to the individual. Focus groups conducted in high-prevalent zip codes indicate that persons who are at increased risk of acquiring HIV also have sub-optimal understanding of their risks and the potential benefit of testing, treatment, and prevention services.

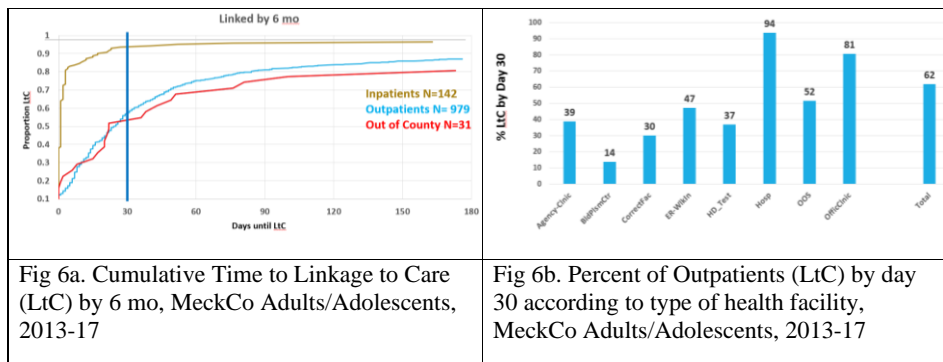
#### Need:

- Comprehensive sexual health education and more current and accurate HIV prevention messaging in schools and colleges, so that young people adopt lifelong attitudes and behaviors that reduce their risk for HIV.
- Destigmatization of HIV in the community, including engaging Churches to do more HIV education and awareness.
- Increasing awareness of Undetectable = Untransmittable (U=U) in the community and amongst medical treaters.

- Increase access to testing by expanding beyond typical health care settings and the traditional Mon-Friday 9AM-5 PM hours particularly in areas of high HIV prevalence. Make HIV test access a matter of convenience.
- Educate the community on the importance of getting tested for HIV and where to get tested.
- Provide clinic/hospital administrator education on the important nature of routine opt-out testing, as recommended by the CDC, and address structural barriers preventing providers from offering routine opt-out testing.

### 3.2 : Treat

It is critical to assure prompt and robust linkage to care to prevent transmission of HIV and minimize new infections. One recent innovation is the use of the “Test and Treat” strategy. The goal of “Test and Treat” is to implement rapid HIV treatment as soon as possible with antiretroviral (ARV) medications to reduce the spread of new HIV transmission. Clinical service jurisdictions such as the San Francisco Department of Health clinics have achieved the start of treatment within days of diagnosis [Scheer 2018, Buchbinder 2018]. “Test and Treat” intend that patients are tested and treatment started on the same day if their HIV test is positive. With this “rapid start” approach, the risk of HIV transmission is substantially decreased, because PLWH who are receiving treatment are far less likely to transmit infection to others. The sooner treatment is started, the shorter the time to viral suppression. This improves the health outcomes in people who do not yet know their serostatus and reduces HIV transmission. Rapid ART initiation reduces the loss of patients in the period between testing and treatment, supporting earlier viral suppression. Time to linkage to Care (LtC) is an important part of the HIV Care Continuum (HCC) because delays from diagnosis until LtC represent missed opportunities in preventing new transmissions of HIV. The CDC’s target for LtC is within 30 days of diagnosis. We have found wide disparities in time to LtC (Fig 6a, b) in Mecklenburg County. While the median time to LtC is a respectable 22 days and only 62% are linked by day 30, one-quarter of patients are not linked by 1 year, and 7% appear to never be linked to care. Healthcare facility making the diagnosis appears one of the most important factors, with in-hospital diagnosis associated with the most rapid LtC. Some diagnostic facilities (e.g., plasma collection centers) have a very delayed time to LtC. Other types of facilities fall into a wide mid-range of time to LtC. Patient demographic and risk factors are not particularly influential, nor is baseline CD4 cell count.



HIV workforce capacity is another critical factor influencing HIV treatment. With PLWH living longer lives, understanding the capacity of our local HIV treatment workforce is critical. A local and recent assessment of our HIV workforce capacity indicated that 66 clinicians prescribed HIV treatment medications to at least 6 unique HIV patients<sup>1</sup> between July 1, 2019, and June 30, 2020. Of these, only 11 clinicians prescribed HIV treatment medications to over 200 (between 225 and 739) patients. There were 389 clinicians who only prescribed HIV medications for 1-5 unique patients over a year, and we excluded these from the analysis because the treatment was likely incidental and not prolonged.

Of the 66 clinicians, 30.3% worked in Family Medicine, 25.8% in Infectious Disease, 15.2% in Gastroenterology, and 12.1% in Internal Medicine (the rest in Other areas of medical specialty). Almost all (61 or 92.4%) were physicians (4 were PAs and 1 was an NP). Assuming the age distribution of the unreported ages (14 out of 66) matches the distribution of those who reported ages, the largest age group represented among the treaters was 55-60 (19 individuals - in red), who are anticipated to retire by 2030. Those in the 60-65 and 65+ age categories (10 individuals - in yellow) are expected to retire by 2025. In other words, 43.9% of the current treater workforce is anticipated to retire by 2030.



### Age Distribution (Adjusted) of HIV Treaters in Mecklenburg County

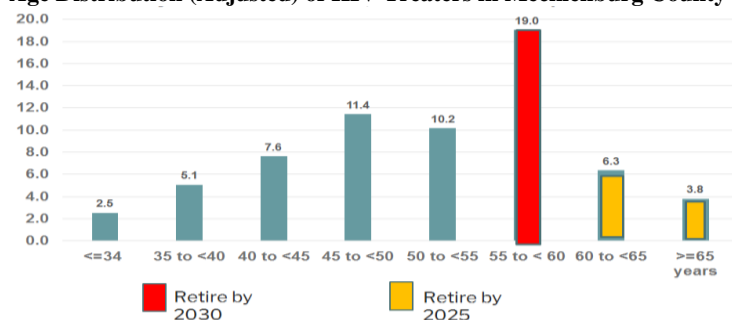


Figure 7: Age Distribution (Adjusted) of HIV Treaters in Mecklenburg County

Experts estimate the number of new clinicians with an HIV specialty entering the workforce in the future will be few. American Academy of HIV Medicine credentialed 18 medical personnel in 2017, 10 in 2018, and 14 in 2019 in NC. However, 28 of those were pharmacists and therefore would not be considered medical treaters (i.e., cannot prescribe HIV medications). Though credentialing is not required and is often not sought by HIV treaters, credentialing offers an indication of the interest for such specialty certification.

Forecasting based on 2014-2019 North Carolina Department of Health and Human Services (NCDHHS) annual HIV surveillance data suggests HIV prevalence in Mecklenburg County is anticipated to jump to 8,766 PLWH in 2025 and 10,238 in 2030. Based on these predictions and the number of treaters anticipated to retire, a ratio of PLWH to treaters was calculated (PLWH/Tr ratio). Assuming this PLWH/Tr ratio represents the Mecklenburg County standard of care, a goal for maintaining current standards should include maintaining this same PLWH/Tr ratio for future years. For the ratio to remain the same in 2025 and 2030, Mecklenburg County would need around 23 new treaters by 2015 and 66 by 2030.

Assisting HIV-positive individuals with HIV testing, navigation in the health care delivery system and networks of supportive services is invaluable in establishing and maintaining treatment adherence and to retention of patients in care, resulting in viral suppression. Providers of this assistance include HIV medical case managers and HIV patient navigators. An assessment of non-medical treaters who provide such direct HIV care services indicates a future need to expand this workforce, as well.

#### Gaps:

- The type of healthcare facility (HCF) appears to denote better or worse LtC. We see that HCFs with no HIV treatment, HIV case management, HIV patient navigators onsite are those with longer times to link clients to care.
- Longer wait times to link uninsured newly diagnosed to care. Providers prefer to see clients only after Ryan White eligibility is approved.
- While the Health Department has patient navigators who link people diagnosed at the Health Department to HIV care, there is a lack of patient navigators/linkage to care specialists to coordinate linkage from other HCFs lacking onsite HIV treatment services.

- Although there is awareness of the importance of rapid treatment among HIV treatment providers, there seems to be inconsistency in the time it takes for newly diagnosed patients to enter care and to start treatment. The reasons for this are not entirely clear. There may be inconsistencies in understanding the importance of rapid start of treatment/“Test and Treat” among some providers, patients, and support organizations.
- A substantial proportion of medical treaters are projected to leave the HIV workforce in the next 5 and 10 years. These will need to be replaced and number augmented, despite the apparently small number who will enter the HIV workforce.

#### Barriers:

- There appear to be inconsistencies in understanding the importance of rapid start of treatment/“Test and Treat” among some providers, patients, and support organizations. In other instances, there may be structural and procedural barriers to rapid entry to the Care Continuum.
- The most identified barriers to prevention and care services in Mecklenburg County involve social determinants of health that can affect access to all needed healthcare services. Such factors include poverty and lack of employment opportunities; low literacy/lack of education; housing; violence; lack of food security; substance abuse; mental illness; transportation issues and more. These are especially impactful for HIV-positive individuals attempting to access care, remain in treatment, and achieve the viral suppression that will improve their health and prevent transmission of the virus. Many Mecklenburg County residents suffer from one or more of these negative social determinants, and the HIV at-risk population is especially likely to be disadvantaged by social determinants of health. Although not typically considered in addressing the medical model of HIV, public health approaches require that these social determinants are addressed as vigorously as are the medical components of HIV. Addressing the social determinants of health and their impact on HIV is limited by the lack of an effective community body to advocate for HIV/AIDS issues. There is not a central coordinating body to address the spectrum of social determinants that negatively affect HIV care.
- Shortage in Linkage to Care Specialists in the community (for timely linkage to and re-engagement in HIV care) to meet client demand.
- No established referral system to link newly diagnosed individuals from ERs, and Blood Plasma centers to HIV care providers.
- No established system to link recently released from incarceration back into HIV care after release.

#### Need:

- Projections of current numbers and future need for medical HIV treaters, based on estimated prevalence of persons living with HIV (PLWH) in Mecklenburg County<sup>1</sup> for 2020, 2025, and 2030 are shown below.

	2020	2025	2030
<b>2020 cohort</b>	66	56	27
<b>Cumulative loss from 2020 cohort<sup>2</sup></b>		10	29
<b>PLWH</b>	7,294	8,766	10,238
<b>PLWH/Tr ratio</b>	110.5	110.5	110.5
<b>Treaters to maintain PH/Tr ratio</b>	66	79.3	92.6
<b>New Treaters needed</b>		23.3	65.6

1. Base Case 2. – Adjusted for “missing age” group, assuming similar age distribution among those recorded as “missing age”
2. Due to retirement from 2020 medical treater cohort at 65years of age

- The availability of supportive social and economic wrap-around services will be key to recruitment to care and retention in care for many of the priority populations of Mecklenburg County. Furthermore, critical to success will be the physical, emotional, and spiritual support provided by the faith community.
- More coordinated linkage to care for clients diagnosed at emergency rooms (ERs), blood plasma centers, and PLWH released from incarceration, as well as “outlier” clinics, with poor performance in linking their newly diagnosed patients to care rapidly.
- Educate providers on specific needs of PLWH recently released from incarceration, and importance of prioritizing linkage to care for this population.
- Secure funding to cover the cost for first/emergency ART pending Ryan White eligibility or insurance qualification paperwork.
- Emphasis should be placed on bringing new HIV medical treaters into the Mecklenburg County workforce. Resources should be sought to attract PAs, and NPs as well as MDs and DOs, into practice in HIV medicine.
- Resources and support are needed to help agencies and CBOs recruit and train care

### 3.4 : Prevent

Today, more tools than ever are available to prevent HIV. Pre-exposure prophylaxis (PrEP) is one of the most effective methods of HIV infection prevention (Grant 2010, Baeten 2012, Molina 2015). Although the use of PrEP was approved by the FDA in 2012 and strongly advocated by Public Health organizations, PrEP is vastly under-utilized in Mecklenburg County. It is estimated that 9,336 adults in Mecklenburg County have PrEP indications, and 1262 of these do not have health insurance (Mecklenburg County Public health). Indications for PrEP treatment are disproportionately high in black adults.

A local PrEP Provider Cohort (PPC) project surveyed 79% of the 29 known PrEP provider practices in Mecklenburg County. In a preliminary analysis, the PPC Team determined that over the last six (6) months, approximately 1284 patients were receiving PrEP provided by 74 PrEP healthcare providers. If the non-participating 21% had similar numbers of PrEP patients, it is extrapolated that approximately

1,625 adults were receiving PrEP in Mecklenburg County in 2018-9, just 17% of the total number of persons with indications for PrEP treatment. The race/ethnicity of PPC patients diverged from that of persons with new HIV diagnoses in MeckCo, supporting the notion that Black/African Americans, uninsured and underinsured are being underserved with PrEP.

Treatment as Prevention (TasP) refers to the use of antiretroviral treatment (ARV) to prevent HIV transmission. When treatment is prescribed early, and adherence to treatment is consistent, the amount of virus in the blood becomes undetectable, and there is effectively no risk of HIV transmission – a concept popularly known as U=U. Thus, in addition to effective treatment lengthening and improving the quality of life in PLWH, suppressive treatment has the added benefit of preventing new infections in others.

Findings from focus groups indicate that condoms are generally accepted and highly used in Mecklenburg County. The community however suggests that condoms be made more readily available for free within the community and on college campuses, and the brand tailored to the preference of the populations served.

#### Gaps:

- Despite the overwhelming evidence that points to the effectiveness of PrEP in preventing new HIV infections, 1 in 3 primary care doctors and nurses still have never heard of it [CDC Vital Signs, 2015]. There are countless stories in Mecklenburg County from patients who have been denied PrEP from their primary care doctors either due to insufficient PrEP knowledge, hence, did not feel comfortable prescribing it or because of the medical providers' attitudes about PrEP.
- Limited community awareness/knowledge of PrEP, U=U, and the link between STIs and HIV acquisition.

#### Barriers:

- There is a noted absence of PrEP Linkage to Care Specialists in the community to help coordinate linkage to PrEP services
- Provider's limited knowledge of PrEP
- Lack of support services to help link to and keep high-risk individuals to PrEP services
- Out-of-pocket costs associated with PrEP services which the uninsured and many underinsured individuals are not able to afford

#### Need:

- Increase provider education about PrEP; facilitation of provider education to their clients/patients about the effectiveness and appropriateness of PrEP to prevent HIV infections
- Expand on the County PrEP Initiative by providing financial assistance to cover the out-of-pocket associated costs for PrEP for the un- and underinsured
- Increase community and provider awareness of U=U
- Targeted education and awareness of PrEP
- Provide targeted education and awareness of the link between STIs and HIV acquisition
- Comprehensive sexual health education and more current and accurate HIV prevention messaging in schools and colleges

### 3.4: Respond

In 2018, 255 new HIV infections were diagnosed in Mecklenburg, a noted decline from 2017. For the county to continue this reduction in HIV infection, prevention and treatment programs must improve their ability to identify new outbreaks and quickly respond to changes in the epidemic. To address this, the North Carolina Division of Public Health has added HIV genotype surveillance (molecular HIV surveillance) to the geographic, demographic, and temporal relationships to identify potential transmission clusters. This process will support rapid investigations of new cases and improved linkages to care among individuals that may otherwise go unrecognized. Data from these state-wide surveillance efforts will be shared locally to improve HIV resources among populations experiencing need. Currently, our systems for such a response are limited to anecdotal, word-of-mouth, and standard contact tracing methods, or to examination of surveillance data (eHARS) that are at least 1 to 1.5 years after diagnosis events.

#### Gaps:

- While there is some data sharing in the community, the primary source of HIV surveillance comes from State and County surveillance programs and some Ryan White monitoring. Data are available from some of the largest providers of HIV care in the County, but overall, these data are fragmented and are not reported directly to the County.
- The standard state-based surveillance reports lack the required local specificity and timeliness to enable proactively and promptly respond to any clusters or outbreaks.

#### Barriers:

- Assessments of the effectiveness of the EHE plan interventions require relatively rapid assessments of interventions; the current turn-around of information of 12-18 months or more is not conducive to the needs for executing an agile and responsive plan and determining clusters of transmission.

#### Need:

We believe it is critical to develop a County-based, near real-time information system, which will allow us to identify potentially linked cases of new transmission and emerging hotspots in order to intervene. Understanding early how well the EHE Plan initiatives are countering the challenges of HIV and achieving the desired goals of HIV prevention and viral suppression is critical for project success. This requires the safe, secure sharing of data to identify what is working, and what needs to be changed. Eliminating silos of service will enhance efficiency and effectiveness. HIV surveillance data is needed to evaluate the plan but needs to be enhanced beyond the current level of surveillance. Integrated and collaborative data sharing among communities providing HIV Continuum of care will help in providing an inventory of the gaps in services. It may also be an effective way to track clients who are out of care and can be used to check for duplication of services. We are now in the early stages of assessing and planning for an HIV Rapid Response Surveillance System (HRRSS)

## SECTION IV: ENDING THE HIV EPIDEMIC (EHE) PLANNING

### 4.1: Diagnose

**Goal 1** - By the end of 2025 at least 75% of Mecklenburg County residents 13 years or older are tested/screened at least once, per CDC guidelines.

Baseline	2021	2022	2023	2024	2025
Unknown	20%	25%	35%	50%	75%

**Goal 2:** By the end of 2025 increase HIV testing rates in priority populations (African American (AA) same gender loving men) by 75%

Baseline	2021	2022	2023	2024	2025
Unknown	20%	25%	35%	50%	75%

#### Activities and Strategies:

- Create partnership with Churches to help promote HIV testing, increase awareness of U=U
- Create opportunity for non-traditional HIV testing models in high-risk zip codes/communities (vending machines, at-home HIV testing, etc.)
- Promote routine opt-out HIV testing as a standard of care across all healthcare systems and community providers of care
- Implement targeted campaigns encouraging HIV testing in high-risk zip codes and amongst African American same gender loving men, Youth and Latinx populations through various channels (mass media, Social media, grassroots awareness, geo-fencing in high-risk zip codes, etc.)
- Implement awareness campaigns and educate the community on the link between STIs and HIV acquisition
- Work with ERs and urgent care clinics to create an environment that fosters routine HIV screening/testing of persons at high risk of HIV
- Support organizations that have delayed LtC (blood plasma centers, selected clinics/offices) to shorten LtC to less than the 30-day target.
- Hire a consultant (preferably a former medical provider) to work with healthcare facility administration to address barriers preventing clinicians from implementing routine opt-out testing

**Key Partners:** ERs, blood plasma centers, primary providers, CBOs, College and Universities, Sexual Health Clinics, acute care settings, Churches, Sororities and Fraternities, Historically Black Colleges and Universities (HBCUs)

**Potential Funding Sources:** CDC



**Estimated Funding allocation:** \$750,000 per year X 5 years = \$3,750,000

**Outcomes:** % Mecklenburg County residents 13 years or older tested for HIV, % of AA same gender loving men tested for HIV

**Monitoring Data Source:** eHARS, State Surveillance, Mecklenburg HIV Rapid Response Surveillance system (when complete)

#### 4.2: Treat

**Goal 1:** By end of 2025, link 90% of newly diagnosed clients to care within 7 days of diagnosis

Baseline	2021	2022	2023	2024	2025
< 50%	50%	60%	70%	80%	90%

**Goal 2:** By end of 2025, 90% of PLWH and who are in care, are virally suppressed

Baseline	2021	2022	2023	2024	2025
~65%	70%	75%	80%	85%	90%

**Goal 3:** By the end of 2025, reduce percentage of persons who have fallen out of care by 17%

Baseline	2021	2022	2023	2024	2025
27%	25%	23%	18%	14%	10%

#### Activities and Strategies:

- Implement targeted awareness campaigns focused on HIV/STI, HIV testing, treatment as prevention/U=U in high-prevalence zip codes and amongst AA same gender loving men, Youth and Latinx populations
- Promote “Test and Treat” by making available emergency ART for first medical appointment pending RW eligibility or insurance qualification paperwork
- Address gaps in supply of HIV treatment workforce
- Promote use of telehealth/telemedicine to reduce stigma of going into a clinic for fear of disclosure, and to make access to care easier for clients
- Strengthen early intervention services (EIS) in high prevalence zip-codes
- Create a local HIV Rapid Response Surveillance System that will generate actionable near real-time linkage/retention data
- Establish patient navigation services between blood plasma centers, ERs, and the Health Department to ensure newly diagnosed are promptly linked to care
- Identify funding to address unmet support services
- Establish partnerships/data-sharing agreements with pharmacies to identify and re-engage patients who have not picked-up ART prescriptions
- Create linkage to care system with detention centers to ensure HIV positive clients who are released from incarceration are promptly connected to HIV care post-release

- k) Implement innovative behavioral intervention models to address behavioral risk factors that are preventing PLWH from engaging in care and or those in care from attaining viral load suppression.

**Key partners:** Detention Centers, ERs, Blood Plasma Centers, HIV testing providers, HIV treatment providers, Sexual Health providers, Colleges and Universities, CBOs, Substance Use Service Providers, Behavioral Health Service Providers, Churches, Fraternities and Sororities.

**Potential funding sources:** HRSA, CDC

**Estimated Funding allocation:** \$850,000/year \* 5years = \$4,250,000

**Outcomes:** % of newly diagnosed individuals linked to care within 7 days, % of PLWH who are in care and virally suppressed, % of persons who have fallen out of care

**Monitoring Data Source:** Mecklenburg County HIV Rapid Response Surveillance System and Dashboard, eHARS, CAREWare

#### 4.3: Prevent

**Goal 1:** By the end of 2025, reach at least 60% of Mecklenburg County residents and visitors with an evidenced-based HIV prevention message

Baseline	2021	2022	2023	2024	2025
Unknown	15%	20%	40%	50%	60%

**Goal 2:** By the end of 2025, at least 50% of persons with PrEP indications are on PrEP

Baseline	2021	2022	2023	2024	2025
17%	19%	22%	26%	30%	34%

**Goal 3:** By the end of 2025, at least 90% of persons referred to PrEP by MCPH are linked to PrEP services within 10 days

Baseline	2021	2022	2023	2024	2025
Unknown	50%	60%	70%	80%	90%

**Goal 4:** By the end of 2022, efforts are made to contact 100% PrEP clients who have discontinued PrEP medication for reasons other than insurance ineligibility or potential side effects and who are still at high risk for acquiring HIV, for purposes of re-engaging into PrEP services

Baseline	2021	2022	2023	2024	2025
Unknown	50%	55%	65%	75%	90%

### Activities and Strategies

- a) Conduct community-wide campaigns to increase the community's awareness of HIV prevention strategies and local HIV-related resources through mass media, social media, grassroots events, etc.
- b) Implement targeted PrEP awareness campaigns among AA same gender loving men and Youth
- c) Engage with Charlotte Mecklenburg Schools (CMS) /Parent Teacher's Association to foster an environment receptive to sexual health/HIV education in schools
- d) Work with colleges to implement HIV/STI education as part of the orientation week for new students
- e) Partner with community organizations and Faith-Based Organizations (FBOs) to provide educational sessions on HIV prevention in the community
- f) Secure funding to cover costs for medical visits, labs, STI testing, and treatment for uninsured and underinsured PrEP clients
- g) Build PrEP navigation capacity within Mecklenburg County by hiring Linkage to PrEP Specialists
- h) Continue conversations with detention centers to encourage provision of PrEP at detention centers
- i) Establish an active referral process between MCPH and PrEP providers

**Key Partners:** HIV Prevention and Care Providers, Sexual Health providers, women's health services/prenatal service providers, Detention Centers, ERs, Churches, Colleges, CMS

**Potential Funding Resources:** CDC, Mecklenburg County

**Estimated Funding allocation:** \$500,000/year \* 5 years = \$ 2,500,000

**Outcomes:** % of Mecklenburg County residents and visitors reached with a HIV prevention message, % of persons with PrEP indications who are receiving PrEP, % of persons referred and linked to PrEP, % of PrEP eligible clients re-engaged into PrEP services

**Monitoring Data:** Marketing Data, pharmacy claims data for PrEP prescriptions, APHI-UNCC PrEP Evaluation data, MCPH Sexual Health Clinic

### 4.4: Respond

**Goal 1:** Increase capacity to identify and investigate active HIV transmission clusters and respond to HIV outbreaks.

### Activities and Strategies:

- Increase capacity for rapid detection and response to active HIV transmission cluster by strengthening the MCPH Epidemiology and HIV/STI outreach workforce
- Develop a Mecklenburg County HIV Rapid Response Surveillance System and Dashboard
- Develop a local Mecklenburg County HIV/STI outbreak response plan
- Engage in routine HIV surveillance meetings with NCDHHS
- Engage community on the development of the rapid response plan and the HIV Rapid Response Surveillance System

**Key Partners:** Local community members, NCDHHS Surveillance team, MCPH IT Department, Academy for Population Health Innovation at the University of NC in Charlotte

(APHI UNC-C), MCPH HIV/STI/EHE/RWHAP programs, G2ZMeckCo. group, RWHAP Planning Body, Churches, CBOs.

**Potential Funding Resources:** CDC, HRSA

**Outcomes:** Fully functioning HIV Rapid Response Surveillance System and Dashboard, Complete Mecklenburg County HIV/STI outbreak response plan

**Monitoring Data:** Progress updates on development of Outbreak Plan, and on development of the Rapid Response Surveillance System and Dashboard

**Source:** Meeting minutes.

## CONCURRENCE ON FINAL EHE PLAN

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Following the November 24<sup>th</sup>, 2020 G2ZMeckCo. planning group meeting where the draft plan was presented and feedback sought, another meeting was held 3 weeks later to present the final plan. On December 15<sup>th</sup>, 2020, the final EHE plan was presented to the G2ZMeckCo. group for concurrence. The goals and annual targets for each pillar were presented to the group and verbal concurrence sought. There were no objections to the stated goals and targets. Suggestions were made to update goals 2 and 4 under the Prevent Pillar. These changes were made immediately, and everyone verbally agreed to the changes.

A follow-up concurrence survey was administered online via Survey Monkey and shared with G2ZMeckCo. group for documented concurrence, and to provide those who were unable to attend the December 15<sup>th</sup> meeting the opportunity to provide input and concurrence. The survey was shared together with the final plan so that everyone had the opportunity to review the EHE plan before responding to the survey.